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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,120	01/12/2004	Minyu Li	1840US01	2583
43896	7590	07/08/2008	EXAMINER	
ECOLAB INC. MAIL STOP ESC-F7, 655 LONE OAK DRIVE EAGAN, MN 55121			FLETCHER III, WILLIAM P	
			ART UNIT	PAPER NUMBER
			1792	
			MAIL DATE	DELIVERY MODE
			07/08/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/756,120

Applicant(s)

LI ET AL.

Examiner

William P. Fletcher III

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/CI)
Paper No(s)/Mail Date 4/12/04, 8/30/04, 11/8/04, 2/18/05, 12/14/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. The restriction requirement mailed February 11, 2008, has been rendered moot by the amendment filed March 4, 2008.

Response to Amendment

2. Claims 21-38 remain pending.

Information Disclosure Statement

3. The information disclosure statements filed April 12, 2004, August 30, 2004, November 8, 2004, February 18, 2005, and December 14, 2005, have been considered by the Examiner.

Specification

4. The abstract of the disclosure is objected to because it fails to recite process steps. Correction is required. See MPEP § 608.01(b).
5. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;

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- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: METHOD OF FINISHING FLOOR.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 21-30 and 35-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The term "increased" in claim 21 is a relative term which renders the claim indefinite. The term "increased" is not defined by the claim, the specification does not

provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The degree of increase required/permitted by the claim is impossible to determine. Claims 31-34 are not indefinite because they expressly state the nature and degree of the increase.

B. In claim 23, with respect to the definitions found in the Society of Dyers and Colourists *Color Index*, it is unclear if this standard is fixed over time or whether the items defined as "pigment white" in the *Index* change over time. Arbitrary designations which are liable to mean different things at the pleasure of the Society do not constitute the positive, exact, intelligible language, so that there will be no uncertainty as to what is meant, required by 35 USC 112, 2nd Paragraph. See *Ex Parte Kattwinkle*, 12 USPQ 11 (Bd. App. 1931).

C. The term "ultrafine" in claim 26 is a relative term which renders the claim indefinite. The term "ultrafine" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear how large the particles of zinc oxide may be and still be considered "ultrafine" within the context of the invention.

D. The term "cleaner" in claim 32 is a relative term which renders the claim indefinite. The term "cleaner" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear with

respect to what the designation "cleaner" is made and how much cleaner the surface must be/may be within the context of the invention is impossible to determine.

E. In claim 33, with respect to the Form 24B Gray Scale Chart, it is unclear if this standard is fixed over time or whether the items defined on this chart change over time. Arbitrary designations which are liable to mean different things at the pleasure of the chart-makers do not constitute the positive, exact, intelligible language, so that there will be no uncertainty as to what is meant, required by 35 USC 112, 2nd Paragraph. See *Ex Parte Kattwinkle*, 12 USPQ 11 (Bd. App. 1931).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. **Claims 21, 23, 24, and 26-38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Levitt et al. (US 2002/0028621 A1) in view of Caldwell et al. (US 6,316,535 B1), Schaefer ("Hiding Power" in *Paint and Coating Testing Manual*), and Hunter et al. (*The Measurement of Appearance*).**

A. Claim 21

i. Levitt teaches a process for the application of a jobsite-renewable floor finish [0014] in which a coating material comprising a film-former [0023] is applied to the floor [0022].

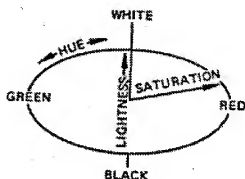
ii. While Levitt teaches that the coating material may contain fillers and colorants [0030], but does not expressly state that the either the filler or the colorant is sufficient lightness-inducing pigment to provide a translucent finish having an increased lightness value.

iii. Caldwell teaches a coating material similar to that of Levitt in that it includes an aqueous, organometallic crosslinked acrylic resin [abstract; 1:50-57; and 3:5-10, for example]. Caldwell further teaches the introduction, as fillers, extender pigments such as titanium dioxide and zinc oxide [1:50-2:7]. Addition of the extender pigments advantageously speeds cure time [3:37 ff.].

iv. It would have been obvious to one skilled in the art to have incorporated, in the coating material [0023] of Levitt, as filler, an extender pigment such as titanium dioxide or zinc oxide, in order to advantageously shorten curing time.

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v. Schaefer teaches that both titanium dioxide and zinc oxide are white pigments that serve to scatter light [p. 484]. As such, it is the Examiner's position that incorporation of either of these pigments into the composition of Levitt will necessarily serve to increase the whiteness (or lightness as evidenced by Hunter et al., p. 9):



vi. Finally, it is the Examiner's position that, while not expressly stated, it would have been obvious to one skilled in the art to formulate the composition so as to provide a translucent coating. At [0020], Levitt teaches that the material may be applied as part of a protective coating atop wallpaper. In such an instance, where it is desirable that the underlying substrate be seen (including wood grain or aggregate patterns in flooring), it would have been obvious to one skilled in the art to formulate a translucent coating to permit visibility of the underlying substrate, as in the wallpaper example of Levitt.

B. Claims 23 and 24

As noted above, Levitt teaches titanium dioxide and zinc oxide, both identified by Applicant as on the *Index*.

C. Claim 26

While no particular particle size for zinc oxide is disclosed by these references, and the exact meaning of "ultrafine" is unclear, pigment particle size is a result-effective variable affecting properties such as viscosity of the composition and hiding power of the coating.

D. Claim 27

As noted above, Levitt teaches a waterborne composition [0023].

E. Claims 28-30

Levitt teaches that the film former is a water-soluble, acid-containing, polymer cross-linked using transition metals, including ROSHIELD 3120, disclosed by Applicant as being a zinc cross-linked acrylic polymer. See [0017] of the specification. Further, Levitt teaches that the composition may be a urethane [0023].

F. Claims 31-34

i. Levitt teaches that the substrate may be vinyl flooring [0022]. Further, insofar as a newly-deposited coating that has not been exposed to dirt or other contaminants is inherently cleaner in appearance, this limitation is met as well.

ii. As for the brightness value, hiding power, and the ratio of the two, these are determined by the amount of pigment present and, as such, are result-

effective variables. It would have been obvious to one skilled in the art to adjust these physical, aesthetic properties of the coating by adjusting the amount of pigment present in the coating, absent evidence of criticality. See MPEP 2144.05.

iii. Finally, as noted above, it would have been obvious to one skilled in the art to formulate a translucent coating to permit visibility of the underlying substrate, as in the wallpaper example of Levitt.

G. Claims 35 and 36

Levitt teaches vinyl flooring, vinyl composite flooring, synthetic sports floor, concrete, marble, and wood [0022].

H. Claim 37

Levitt teaches applying the coating material [0023] as an intermediate layer between the substrate and a different overcoating layer [0025].

13. **Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levitt et al. (US 2002/0028621 A1) in view of Caldwell et al. (US 6,316,535 B1), Schaefer ("Hiding Power" in *Paint and Coating Testing Manual*), and Hunter et al. (*The Measurement of Appearance*), as applied to claim 21 above, further in view of Braun (*White Pigments*).**

A. Claim 22

i. As noted above, Schaefer teaches that titanium dioxide and zinc oxide pigments will diffusely reflect light. None of the references cited in the

rejection of claim 21 above expressly teaches that the pigment has a submicron average particle diameter.

ii. Braun teaches that, for typical titanium dioxide pigment, particle sizes distribution is less than 1 micron [p. 24, Fig. 23].

iii. Consequently, it would have been obvious to one skilled in the art to utilize such a typical pigment particle size distribution motivated by the desire and expectation of successfully incorporating titanium dioxide pigment into the coating composition.

B. Claim 25

i. None of the references cited in the rejection of claim 21 above expressly teaches that the titanium dioxide is in rutile form.

ii. Braun further teaches that rutile is the most stable and widely-used form in pigment applications [p. 23, first column].

iii. Consequently, it would have been obvious to one skilled in the art to utilize such a typical pigment form motivated by the desire and expectation of successfully incorporating titanium dioxide pigment into the coating composition.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Sunday, 5:00 AM - 12:00 PM and Monday through Friday, 5:00 AM - 3:30 PM; on campus every Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/
Primary Examiner

June 13, 2008